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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,665	04/02/2004	Chang-Hyeon Lee	P57062	1017
7590	07/26/2005		EXAMINER	
Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005			FIGUEROA, NATALIA	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/815,665	LEE, CHANG-HYEON
	Examiner Natalia Figueroa	Art Unit 2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 02 April 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 50-61 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 50-61 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 04/02/2004.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on April 02, 2004 (04/02/2004) is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Objections***

2. Claim 57 is objected to because of the following informalities: Claim 57 as presented ends in a semicolon, the examiner suggests applicant to review all claims for correct punctuation. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 50, 52, 55, 57 and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimura et al (USPN 5,966,279), hereinafter Shimura.

RE claim 50, Shimura discloses an apparatus for detecting abnormalities (abstract), said apparatus comprising a plurality of heads for recording data onto a medium and reproducing data from the medium (figs. 1 and 3(b) and col. 1, lines 13-19); a controlling unit for controlling said

plurality of heads to reproduce a signal from the medium while the signal is being recorded onto the medium (fig. 1, col. 2, lines 36-39); and a determining unit for determining an abnormality in the recorded signal in dependence upon a result obtained when comparing the signal reproduced from the medium with a reference signal (col. 2, lines 60-67).

RE claim 52, Shimura discloses an apparatus for detecting abnormalities (abstract), said apparatus comprising: a plurality of heads for recording data onto a medium and reproducing data from the medium (figs. 1 and 3(b) and col. 1, lines 13-19); a controlling unit for controlling said plurality of heads to reproduce a signal from the medium while the signal is being recorded onto the medium (fig. 1, col. 2, lines 36-39); and a determining unit for determining an abnormality in the recorded signal in dependence upon the signal reproduced from the medium (col. 2, lines 60-67); said plurality of heads comprising a first head formed on a head drum with said first head having a first azimuth angle (or heads a-d; figs. 3(b) and 4 and col. 1, lines 41-45); a second head formed on the head drum with said second head having a second azimuth angle different from said first azimuth angle (or heads a-d; figs. 3(b) and 4 and col. 1, lines 41-45); and a third head formed on the head drum and disposed between said first and second heads (or heads a-d; figs. 3(b) and 4 and col. 1, lines 41-45).

RE claim 55, method claim 55 is drawn to the method of using the corresponding apparatus claimed in claim 50. Therefore method claim 55 corresponds to apparatus claim 50 and is rejected for the same reasons of obviousness as used above.

RE claim 57, Shimura discloses a digital recorder and player, comprising a plurality of heads (figs. 1 and 3(b)) comprising a first head formed on a head drum; a second head formed on the head drum; and a third head formed on the head drum and disposed between said first and

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second heads (or heads a-d; figs. 1 and 3(b) and col. 1, lines 13-19) said plurality of heads recording digital data onto a medium and reproducing data from the medium, said heads reproducing a digital signal from the medium while the digital signal is being recorded onto the medium by at least one of said heads (col. 2, lines 50-59); and a determining unit determining an abnormality in the recorded signal in dependence upon the digital signal reproduced from the medium (col. 2, lines 60-67).

RE claim 58, Shimura further discloses that said first head and said second head are each formed on an outer surface of the head drum (fig. 3(b) and col. 1, lines 19-23).

5. Claim 59 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama et al (USPN 5,479,098), hereinafter Yokoyama.

RE claim 59, Yokoyama discloses a recording and reproducing apparatus, comprising a controller for outputting first and second switching signals (figs. 11 –12 and col. 2, lines 52-56); a first switch operating in response to said first switching signal, said operating of said first switch activating a first head to record first data onto a medium (col. 3, lines 44-47); and a second switch operating in response to said second switching signal, said operating of said second switch activating a second head to reproduce second data from the medium during said recording of said first data, said second data corresponding to said first data recorded on the medium, said second data reproduced from said medium being substantially identical to said first data recorded onto said medium when abnormalities are not present (col. 3, lines 45-59).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 51 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura in view of Kataoka et al (USPN 6,327,104), hereinafter Kataoka.

RE claim 51, Shimura is relied upon for the same reasons of rejection as stated above. Shimura fails to explicitly teach that said determining unit compares a signal level of an envelope of the signal reproduced from the medium with a reference signal level. However, Kataoka discloses such in (col. 1, lines 28-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the device as disclosed by Shimura with the above teachings from Kataoka, the motivation being in order to determine if an abnormality has occurred, hence avoiding deterioration of the video recording.

RE claim 56, method claim 56 is drawn to the method of using the corresponding apparatus claimed in claim 51. Therefore method claim 56 corresponds to apparatus claim 51 and is rejected for the same reasons of obviousness as used above.

8. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura in view of Yamashita (USPN 5,018,036).

RE claim 53, Shimura discloses an apparatus for detecting abnormalities (abstract), said apparatus comprising: a head drum having a plurality of heads formed thereon (figs. 1 and 3(b) and col. 1, lines 13-19); a controlling unit for controlling said plurality of heads to reproduce a

signal from the medium while the signal is being recorded onto the medium (fig. 1, col. 2, lines 36-39); and a determining unit for determining an abnormality in the recorded signal in dependence upon the signal reproduced from the medium (col. 2, lines 60-67). Shimura fails to explicitly teach said plurality of heads comprising a first head having a first azimuth angle for recording first information, selected from the data, onto the medium; a second head having a second azimuth angle different from said first azimuth angle for recording second information, selected from the data, onto the medium; said first and second heads being respectively formed at separate locations of said head drum; and a third head for reproducing third information from the medium, said third information corresponding to information selected from the first information and the second information, said third head being formed on an outer surface of said head drum and between said first and second heads.

However, Yamashita discloses such first head ... (abstract, fig. 1 and col. 4, lines 35-37), such second head ... (abstract, fig. 1 and col. 4, lines 35-37), and such third head ... (abstract, fig. 1 and col. 4, lines 37-42). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the device as disclosed by Shimura with the above teachings from Yamashita, the motivation being in order to have heads exclusively for recording and reading hence, hence being able to read after write and check for errors, therefore avoiding data corruption and loss.

RE claim 54, the combination of Shimura and Yamashita is relied upon for the same reasons of rejection as stated above. Shimura further discloses that said determining unit determining the abnormality in the recorded signal in dependence upon a result obtained by comparing the signal reproduced from the medium with a reference signal (col. 2, lines 50-67).

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9. Claims 60 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama in view of Shimura.

RE claim 60, Yokoyama is relied upon for the same reasons of rejection as stated above. Yokoyama fails to explicitly teach a comparator for comparing predetermined reference data to said second data, and for outputting an alert signal to notify a user when said predetermined reference data is not substantially equal to said second data. However, Shimura discloses such in (col. 2, lines 60-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the device as disclosed by Yokoyama with the above teachings from Shimura, the motivation being in order to give notice if an abnormality has taken place, hence avoiding corruption or loss of data.

RE claim 61, Yokoyama fails to explicitly teach said comparator not outputting said alert signal when said predetermined reference data is substantially equal to said second data. However, Shimura discloses such in (col. 3, lines 20-26).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554. The examiner can normally be reached on Monday - Thursday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

~~NO~~  
NFM

✓  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
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